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(58) Field of Search

UK CL (Edition O) E1G G708

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(54) Cone-mountable tape dispenser and barrier

(57) A road traffic cone-mountable tape dispenser (6,8) comprises means (10) for mounting the dispenser on a cone (2,4) and means (14) for storing tape (16) from which storing means tape can be dispensed for attachment to, for example, another road cone in order to form a barrier.

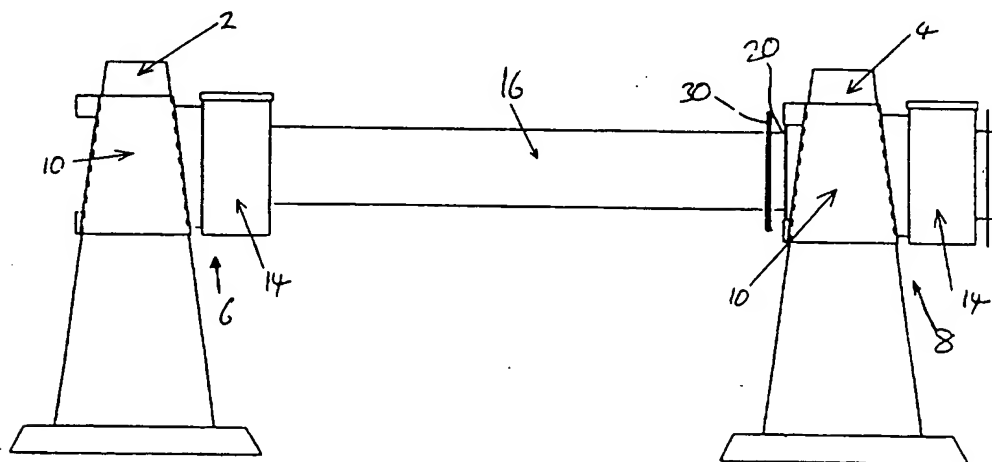


Figure 1

GB 2 307 500 A

1/3

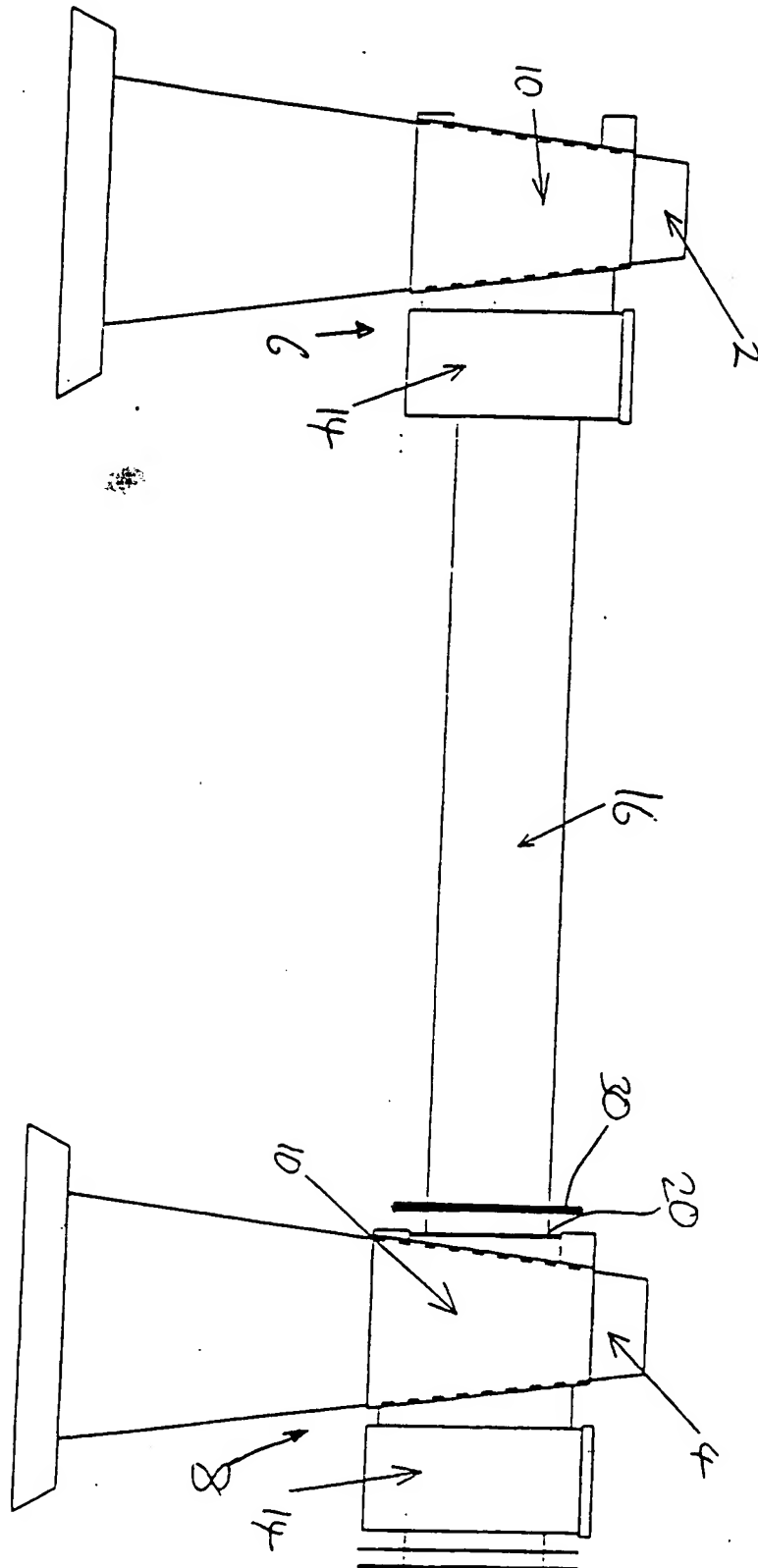


Figure 1

2/3

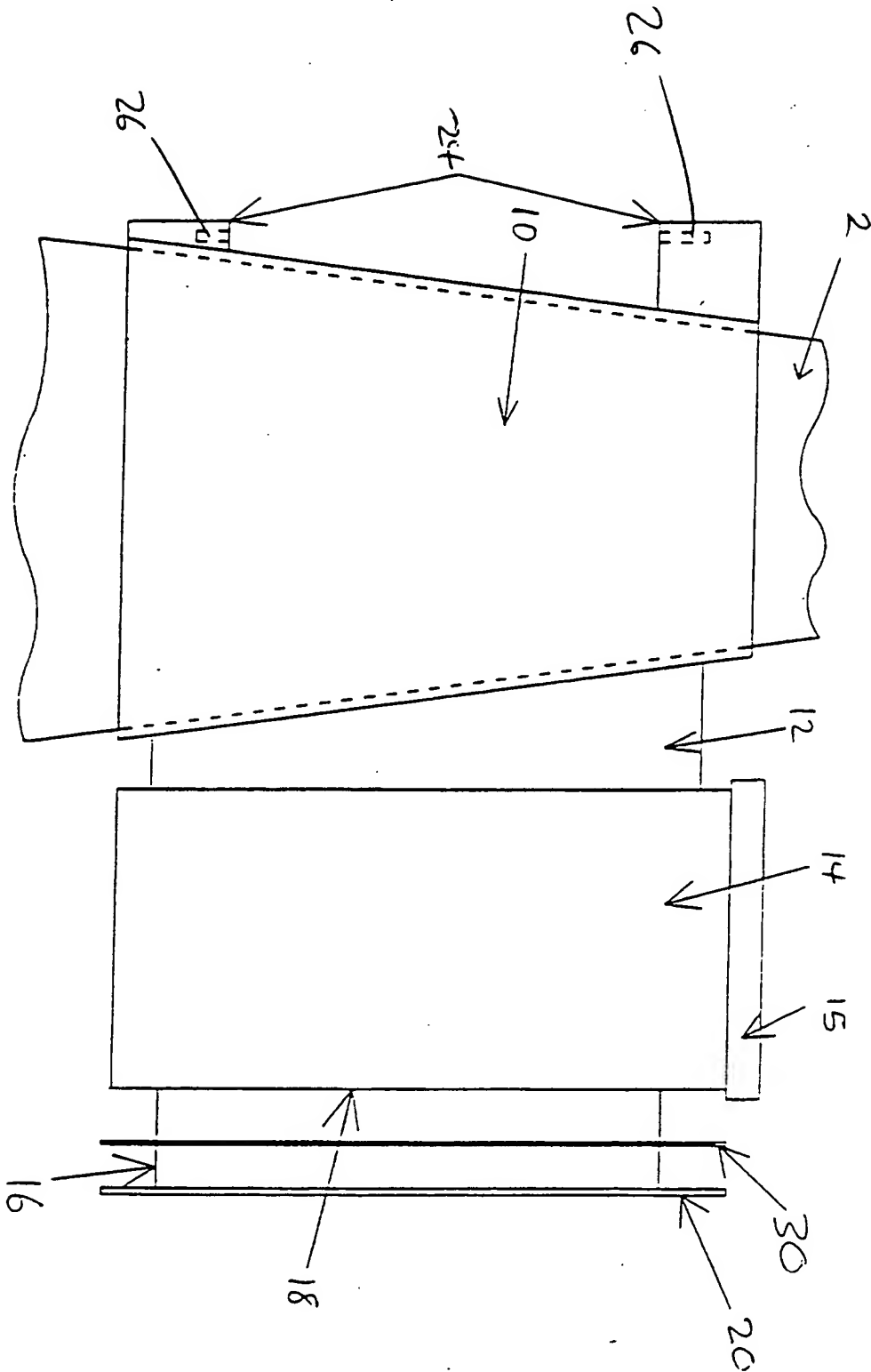


Figure 2

3/3

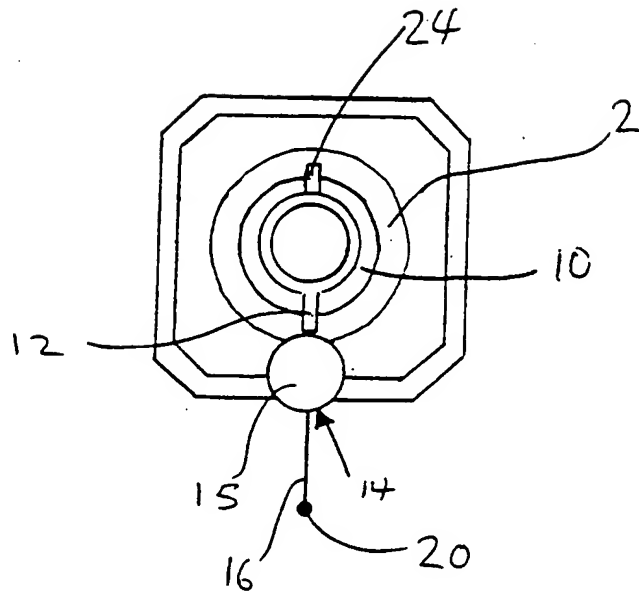


FIGURE 3

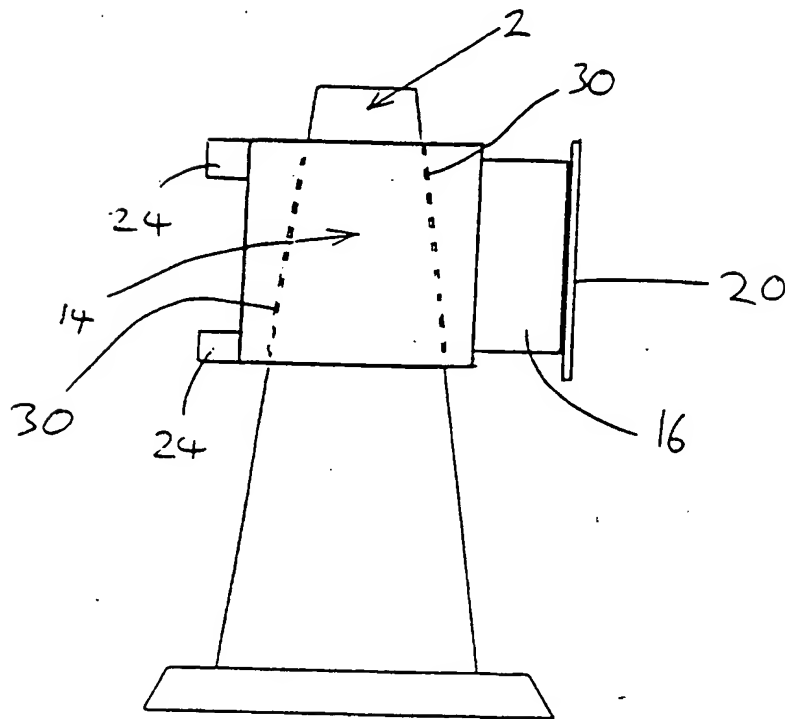


FIGURE 4

A CONE-MOUNTABLE TAPE DISPENSER AND BARRIERField of the Invention

5 The present invention relates to cone-mountable tape dispensers and related barriers. In particular, though not exclusively, it relates to such arrangements for forming a road work or the like barrier.

Background to the Invention

10 Road traffic cones are well known to motorists and pedestrians as a means for forming a barrier cum warning line to cordon off a certain area. Often the barrier is used to cordon off roadworks or an area from which vehicles and/or pedestrians are prohibited, for instance for safety reasons.

20 To minimise the number of cones required to save costs and/or space, it is known to provide a road traffic cone with separate means for mounting planks of wood therebetween. Such arrangements still take up too much space and lack versatility. It is also known to tie lengths of plastic tape between cones but these are difficult to handle, the tapes easily becoming tangled and in addition they cause environmental waste as the tape tends not to be re-used.

30 It is an aim of preferred embodiments of the present invention to obviate or overcome disadvantages with the prior art, whether referred to herein or otherwise.

Summary of the Invention

According to the present invention in a first aspect,
there is provided a cone-mountable tape dispenser
5 comprising means for mounting the dispenser on a cone and
means for storing tape from which storing means tape can
be dispensed.

Such an arrangement has the advantages that it can be
10 easily stored, taking up little space, yet can be used to
form a variable sized barrier between two cones, or one
cone and another object.

Suitably, the tape comprises a flexible strip, a rope
15 or cord. The tape may comprise a fabric.

Suitably, the tape carries a reflective and/or
luminous material.

20 Suitably, the mounting means comprises a generally
conical truncated tube. More suitably, the mounting means
is sized and configured to mount the dispenser on a road
traffic cone.

25 Suitably, the dispenser additionally comprises means
for releasably locking the dispenser to a cone.

Suitably, the storing means comprises means for
biasing the tape to a stowed position. More suitably the
30 biasing means maintains the dispensed tape in tension.

Suitably, the dispenser additionally comprises a
connection element carried by the tape and means for
interengaging with a connection element whereby the
35 connection element and dispenser can be secured together.

More suitably, the connection element comprises a bar and the interengaging means comprises a slot for receiving the bar. In this way a plurality of like dispensers can be connected together on cones to form a contiguous barrier.

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According to the present invention in a second aspect there is provided a cone comprising a tape dispenser as set out in the preceding paragraphs according to the first aspect of the present invention.

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Suitably, the cone is a road traffic cone.

According to the present invention in a third aspect there is provided a barrier comprising a plurality of cones on at least some of which are mounted tape dispensers according to the first aspect of the invention and tape extending between at least some of said dispensers on said cones.

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Suitably, the cones are road traffic cones.

According to the present invention in a fourth aspect, there is provided a method of forming a barrier, which method comprises the steps of:-

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- (i) providing a plurality of cones;
- (ii) mounting tape dispensers on at least some of said cones;
- (iii) dispensing tape from at least one dispenser on one cone to another cone; and
- (iv) securing the tape to another cone.

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Brief Description of the Drawings

The present invention will now be described, by way of example only, with reference to the drawings that follow, in which:

Figure 1 is a schematic front elevation of two cones carrying tape dispensers according to the present invention and with a barrier formed therebetween.

Figure 2 is an enlarged schematic front elevation of a cone on which is mounted a tape dispenser according to the present invention.

Figure 3 is a schematic plan view of the cone and dispenser arrangement shown in Figure 2 to a reduced scale.

Figure 4 is a schematic front elevation of a second embodiment of the present invention.

Description of the Preferred Embodiments

Referring to Figures 1 to 3 of the drawings that follow, there is shown a first road traffic cone 2 and a second road traffic cone 4. On the first cone 2 is mounted a first tape dispenser 6 and on the second cone 4 is mounted a second tape dispenser 8. The tape dispensers 6 and 8 are substantially similar so only one of them will be described in detail. In the drawings like reference numerals are used to identify like integers.

Tape dispenser 6 comprises a conical truncated tubular mounting sleeve 10 connected by a rigid web 12 to a generally cylindrical tape storing and dispensing

container 14 with a cap 15. The container 14 stores tape 16 and includes a biased axle (not shown) around which the tape 16 can be wound inside the container. Such a container 14 for dispensing tape under tension is well known per se for instance from European patent application number 0 352 071, but not in a configuration for mounting on a cone or for this use.

The tape 16 enters and exits the container 14 via a slot 18.

At the end of the tape 16 distant from the container 14 is provided a cylindrical plastics bar 20 comprising a connection element. From the sleeve 10 extends an interengaging element 24 comprising two shaped slots or channels 26 adapted to receive the bar 20.

The tape 16 comprises a fabric and is coated with or has applied thereto reflective and/or luminous materials to enhance its visibility. Although the tape 16 will normally comprise a strip of fabric, it may be another strip, a cord or rope. Other alternatives include fabric or plastics netting.

The conical sleeve 10 is shaped configured to fit over a road traffic cone 2,4 by gravity to form a snug fit therewith.

In operation, dispensers 6,8 are placed over adjacent (or a plurality) of road traffic cones 2,4 respectively and the plastics bar 20 pulled to withdraw tape 16 from the container 14. The bar 20 is pulled to an adjacent dispenser 8 and slotted into the interengaging element 24 thereby to secure the bar 20 and tape 16 in place. The tape 16 thus forms a barrier between the two cones 2,4.

If the tape 16 is to be extended from container 14 to a cone that does not carry another like dispenser 6,8 or to another object, the tape 16 can be wound around the other object and connected to itself by a hook element 30
5 thereby to secure the tape 16 in position.

To prevent the dispensers 6,8 from being stolen, known means (not shown) can be provided for releasably locking them to the respective cones.
10

In a further embodiment of the present invention shown in Figure 4 of the drawings that follow, the container 14 may include a conical truncated tubular centre 30 (acting as a sleeve) to enable the container 14
15 to be slipped over a cone 2,4. In this way, the design can be simplified and the need for a separate sleeve 10 being dispensed with. However, the design described above and shown in the figures means that a simpler biasing system within a container 14 can be used.
20

The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this
25 specification, and the contents of all such papers and documents are incorporated herein by reference.

All of the features disclosed in this specification (including any accompanying claims, abstract and
30 drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

Each feature disclosed in this specification (including any accompanying claims, abstract and drawings), may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

The invention is not restricted to the details of the foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

CLAIMS

1. A cone-mountable tape dispenser comprising means for mounting the dispenser on a cone and means for storing tape from which storing means tape can be dispensed.
2. A tape dispenser according to Claim 1, in which the tape comprises a flexible strip, a rope or cord.
3. A tape dispenser according to Claim 2, in which the tape may comprise a fabric.
4. A tape dispenser according to any preceding claims in which the tape carries a reflective and/or luminous material.
5. A tape dispenser according to any preceding claim, in which the mounting means comprises a generally conical truncated tube.
6. A tape dispenser according to Claim 5, in which the mounting means is sized and configured to mount the dispenser on a road traffic cone.
7. A tape dispenser according to Claim 2, in which the dispenser additionally comprises means for releasably locking the dispenser to a cone.
8. A tape dispenser according to any preceding claim, in which the storing means comprises means for biasing the tape to a stowed position.
9. A tape dispenser according to Claim 8, in which the biasing means maintains the dispensed tape in tension.

10. A tape dispenser according to any preceding claim, in which the dispenser additionally comprises a connection element carried by the tape and means for interengaging with a connection element whereby the connection element and dispenser can be secured together.

11. A tape dispenser according to Claim 10, in which the connection element comprises a bar and the interengaging means comprises a slot for receiving the bar.

12. A cone comprising a tape dispenser as claimed in any one of Claims 1 to 11.

13. A cone according to Claim 12, in which the cone is a road traffic cone.

14. A barrier comprising a plurality of cones on at least some of which are mounted tape dispensers as claimed in any one of Claims 1 to 11 and tape extending between at least some of said dispensers on said cones.

15. A barrier according to Claim 14, in which the cones are road traffic cones.

16. A method of forming a barrier, which method comprises the steps of:-

- (i) providing a plurality of cones;
- (ii) mounting tape dispensers on at least some of said cones;
- (iii) dispensing tape from at least one dispenser on one cone to another cone; and

(iv) securing the tape to another cone.

17. A cone-mountable tape dispenser substantially as
described herein, with reference to and as shown in the
5 accompanying drawings.

18. A cone substantially as described herein.

19. A barrier substantially as described herein with
10 reference to and as shown in Figure 1 of the accompanying
drawings.

20. A method of forming a barrier substantially as
described herein.

Patents Act 1977
 Examiner's report to the Comptroller under Section 17
 (The Search report)

-11-

Applicant number
 GB 9524139.4

Relevant Technical Fields

(i) UK Cl (Ed.O) E1G (G708)

(ii) Int Cl (Ed.6) E01F 9/012

Search Examiner
 DAVE HAWORTH

Date of completion of Search
 13 FEBRUARY 1996

Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii) ONLINE DATABASE: WPI

Documents considered relevant following a search in respect of Claims :-
 1-20

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